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ABSTRACT

Some insights into the development of an eleventh grade test of "adult functional competency" are provided. The evolution of the test from its first mention to its translation into a test item pool is traced. An attempt is made to identify some of the instructional, measurement, and legal implications inherent in various decisions which shaped the test development process. The specifics of this paper are peculiar to a test required as part of the South Carolina Basic Skills Assessment Program; however, many of the aforementioned implications are applicable to test development projects carried out in other settings. (Author/GK)

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The Evolution of a Test of Adult Functional Competency*

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The Evolution of a Test of Adult Functional Competency

Introduction

As minimum competency testing programs have been mandated during recent years, terms such as "functional literacy", "independent literacy", and "functional competency" have been liberally sprinkled throughout the legislation and policies which created the programs. More often than not, the terms are undefined. In those instances in which they are defined, the definitions tend to be circular. Although policy makers may not define their terms, any suggestion that the selection and use of terms such as functional competency have been made unthinkingly is erroneous. In at least some instances, it is clear that the selection of these terms was made only after considerable debate and deliberation. There seems to be little doubt that the intent of the policy makers is indeed to certify whether or not high school graduates are "functionally literate", "independently literate" or possess the skills necessary to function "competently" as an adult. What is not so clear, however, is whether the policy makers gave serious, or any, consideration to the measurement and legal issues inherent in their choice of labels. While it is possible to certify, with a reasonable degree of certainty, whether or not a candidate for high school graduation can read, write, and compute at specified performance levels, there is far less certainty attached to any statement about the relationship between these performance levels and concepts such as adult functional competency.

The purpose of this paper is to provide some insights into the development of an eleventh grade test of "adult functional competency". The paper traces the evolution of the test from the time of its first mention in the report of a Special Joint Committee of the South Carolina General Assembly to its

translation into a test item pool. Rather than simply presenting a chronology of events related to the test development, an attempt is made to identify some of the instructional, measurement, and legal implications inherent in various decisions which shaped the test development process.

Although the specifics of the paper are peculiar to a test required as a part of the South Carolina Basic Skills Assessment Program, many of the measurement, instructional, and legal implications are applicable to test development projects carried out in other settings.

Background

The history of the legislation establishing the South Carolina Basic Skills Assessment Program began in 1977 with the introduction of the Murray-Barksdale bill in the South Carolina House of Representatives. The bill provided for the implementation of a program of grade-by-grade promotion based on achievement test scores. The proposed program was to be implemented over a 12 year period beginning in Grade 1 and adding a grade each year until all grades were included. The bill further provided that the State Department of Education would select the tests and determine the required scores. Although the bill did not receive favorable action in the General Assembly, it did generate sufficient interest to result in a Joint Resolution creating a special committee to study the issue of minimum competency in the basic skills.

In its report to the General Assembly, the special committee created by the joint resolution included a draft of proposed legislation which was introduced as an amendment to the Murray-Barksdale bill. The legislation which established the South Carolina Basic Skills Assessment Program is a derivation of the bill included in the report of the special committee.

Although over 80 amendments were introduced during the passage of the Basic Skills legislation, with one major exception the law is essentially the same as the bill proposed by the special committee. The major exception relates to the eleventh grade test of "adult functional competency". The special committee had proposed that administration of the eleventh grade test begin in Spring, 1982, and that beginning in 1986 a passing score on the test become an additional criterion for receiving a high school diploma. As a result of compromises reached during debate of the bill, a major section specifically relating the test and the high school diploma was deleted; some dates were changed; and some confusion and ambiguity resulted. Although legislative intent is often difficult to ascertain, it appears that the intention was to divorce the test and the diploma. However, some language related to the deleted section was apparently overlooked and, as it now stands, the State Board of Education is to use the test data collected during the period 1982-89 for the purpose of determining the high school credentials to be awarded students not meeting the minimum achievement scores.

Although this paper deals specifically with the eleventh grade test of "adult functional competency", it may be informative to view the test in the context of other requirements in the legislation. Among the major provisions of the law are the requirements that the State Board of Education, through the State Department of Education:

1) establish educational objectives, with minimum standards of student achievement, in the basic skills areas of reading, writing, and mathematics for Grades K-12;

2) select a readiness test to be administered at the beginning of Grade 1;

3) select or develop criterion-referenced tests in reading and mathematics to be administered at the end of Grades 1, 2, and 3;

4) select or develop criterion-referenced tests in reading, writing, and mathematics to be administered at the end of Grades 6 and 8;

5) select or develop a test of adult functional competency to be administered at the end of Grade 11; and

6) field-test instructional programs designed to meet the needs of students whose achievement is below the minimum standards (S.C., 1978 Act 631)

Additionally, the legislation established the Basic Skills Advisory Commission, set forth a schedule for the implementation of the various requirements, and required that all public school districts participate in the program. The law explicitly requires that the results of the testing program will be used as a basis for providing appropriate instruction for those students who do not achieve the minimum standards that are set. None of the tests are, at this time, related to student promotion/ retention or the award of a high school diploma. Although, as previously mentioned, the eleventh grade test may be tied to the high school diploma beginning in 1990.

What began in 1977 as a move to require grade-by-grade promotion based on testing, culminated in 1978 in a required testing program to be used for the diagnosis of student deficiencies and as a basis for providing basic instruction to assist students in overcoming those deficiencies. The focus of most of the legislation is clearly on the improvement of instruction. In that context, the eleventh grade test is something of an enigma. As initially proposed, it was intended to certify student achievement. As finally legislated, it will not serve that purpose until 1990, if at all, and in the interim its utility in the scheme of instructional improvement appears questionable.

The Test of Adult Functional Competency

As indicated earlier, one of the proposals included in the draft legislation developed by the Special Committee was that a test of "adult functional competency" be selected or developed and that the test be administered at the end of Grade 11. Also included in the committee's report was a rationale for each major section of the proposed legislation. The following rationale was provided for the test of adult functional competency.

> All recipients of the state high school diploma should possess adult functional competency. This term, which is synonymous with "independent literacy" means an individual should possess those skills and that knowledge necessary to function independently and successfully in assuming the responsibilities of citizenship. In other words, a high school graduate should have obtained the basic skills that are necessary to acquire and use the information that is necessary to be responsible citizens and productive workers.
>
> The Department of Education will field test a minimum achievement test it selects or develops so we can be sure a reliable and valid test will be used to measure adult functional competency. (Report of the Special Joint Committee to Study Minimal Competency in Basic Skills, 1977, p. 21)

Another section of the special committee's proposed legislation required that the State Board of Education, through the State Department of Education, "...establish school year 1985-86 as the date for implementing the test as one of the conditions for receiving a South Carolina high school diploma. Any student who fails to pass this test shall be provided special instruction and given an opportunity to take the test again in Grade 12." The committee provided the following rationale for this section.

> By the school year 1985-86, the test provided for in Section I(e) would have been administered for 4 years to all eleventh graders, with the results being used to modify and thereby strengthen districts' programs. It is only after that 4 year period, plus a minimum of 1 year's testing for reliability and validity, that eleventh graders will have to pass the adult functional competency test and meet all other graduation requirements in order to receive the state high school diploma.

The committee rejected suggestions that a test for graduation be immediately imposed on South Carolina students. Moving so quickly on such a requirement may, in the abstract, seem completely justifiable, but when one weighs the impact a mistake in this regard could have on the futures of so many of our children, the wiser, prudent, and more equitable course is to phase in the requirement (with a number of safeguards) over a period of time.

On the other hand, the committee rejected suggestions that a proficiency examination should never be used for graduation purposes. The student who earns his diploma through work is entitled to receive an award for his work that is different from the gift given to those who simply put their time in. The student who is functionally illiterate should be detected before he graduates and given special help, with an incentive added for him to attempt to correct his deficiencies. Employers and colleges have a right to look upon a diploma as representing some minimum level of achievement.

Thus, the foregoing provisions are designed to bolster the credibility of the State High School Diploma, detect student deficiencies before receipt of Diploma, and provide an incentive for correcting those deficiencies.

Those provisions are, finally, designed to avoid the unfairness of arbitrarily imposing graduation requirements on students who have not had the benefit of programmatic changes that are designed to develop curricula that can prepare the student for the proficiency examination. The examination will have been field tested for at least one year to insure its reliability and validity, and will also have been administered for four years, with the results of those four years of administration being used for program adjustments and modifications. It is only after this extensive period of study and program modification that a graduation requirement will be imposed on those who are eleventh graders in 1985-86; these eleventh graders are today's third graders, who will have been assessed on the basic skills in grades 6 and 8 and will have received the instruction designed to correct any deficiencies that have been detected.

The type of certificate an individual will receive who fails the proficiency examination each time he takes it will depend on the analysis of the State Board of Education of the four years of data that is collected. We have no way of knowing what type(s) of students will consistently fail to meet the minimum standard, if any do. It is appropriate, therefore, that this decision depend on the analysis of data, especially since at that time there will be a better understanding of the full impact of the Basic Skills Assessment Program. (Report of the Special Joint Education Committee to Study Minimal Competency in Basic Skills, 1977, pp. 22-23)

Although the language which unambiguously tied the eleventh grade test to the high school diploma was deleted prior to enactment of the legislation, the language requiring the development and administration of the test remained. While it is difficult for this writer to find fault with the rationale supplied by the special committee, it is exceedingly easy to conjure a myriad of measurement, instruction, and consequent legal problems arising from the use of the term "adult functional competency" and the committee's equating of the term with "independent literacy".

Since the implementation schedule contained in the legislation did not require the development of the eleventh grade test until the 1980-81 school year, and there was much work to be done immediately in identifying objectives and developing other tests, concerns about construct, curricular, and instructional validity were not pursued initially beyond an effort to alert the Basic Skills Advisory Commission to the fact that those issues would have to be addressed prior to and during test development.

In Fall, 1979, staff of the Department of Education discussed the issues with the Basic Skills Advisory Commission and, at that time, recommended that the Commission request a change in the language of the legislation. The recommended change suggested the use of a test of "basic skills" in lieu of the test of "adult functional competency". Although the Commission apparently understood, at least to some extent, the problems with attempting to operationally define "adult functional competency", the Commission voted against requesting a change at that time. The decision was based on practical politics. The Commission did not wish to raise the issue and possibly reopen the debate concerning the high school diploma during an election year. The

Commissioners were concerned that desirable portions of the legislation might be placed in jeopardy if some candidates for re-election began using the Basic Skills Legislation as a basis for campaign rhetoric.

Since no action was taken to modify the legislation during the 1980 session of the General Assembly, the test development required during 1980-81 was, of necessity, initiated in a manner consistent with the provisions of the law.

As a first step in the test development process, Department of Education staff met with the Advisory Commission in an effort to define "adult functional competency". During that meeting the issues of construct validity, curricular validity, and instructional validity were thoroughly discussed. In addition to those issues, the Commission expressed concern about the type of labeling that might result for those students who ultimately did not reach the minimum standard of achievement which the law required be set for the test. As a result of the discussion, the Commission recommended that the test be defined as "an eleventh grade test that shall test the school skills of reading, writing, and mathematics -- the foundation of post school learning -- as identified in the Basic Skills Objectives". Additionally, the Commission specified that some test items should require the application of school skills to life situations. Further, the Commission agreed that the test, when developed, should be referrred to as the eleventh grade test of basic skills and the term "adult functional competency" should no longer be used."[1]

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[1]Although the discussion and subsequent recommendation served to clarify the position of the Commission and provide some guidance for test development, the language of the law remained unchanged. Consequently, Department of Education staff are still concerned about the issue of construct validity since the legislatively authorized name of the test is still "adult functional competency".

Acting on the Commission's recommendation, the Department of Education and the contractor proceeded with the test development during the 1980-81 school year. The steps involved included: 1) the development of a "framework" or position paper, in which issues such as item difficulty, reading levels, test item types, and the reduction of potential bias were discussed and positions taken as to how the issues would be resolved; 2) development of test item specifications; 3) item writing, review, and revision; and 4) field-testing. Field-testing is scheduled during May, 1981.

As a result of preferences expressed by the Advisory Commission, Department of Education staff, and committees of South Carolina educators, the test consists of subtests in reading, mathematics, and writing. The writing portion requires student-generated writing samples in response to carefully designed stimulus materials. The modes of discourse identified as "fair game" for the writing test are narration, description, exposition, and persuasion, although only one type will be assessed in any given year. The items have been derived directly from the previously identified basic skills objectives and incorporate as much adult, reality-based content as possible.

During Fall, 1980, after test development was initiated, the Advisory Commission concurred with a recommendation from the Department of Education that an effort be made to modify the legislation by substituting a test of basic skills for the required test of adult functional competency. The State Board of Education accepted the proposed change and the suggested new language was presented to the Senate Education Committee in February, 1981. At the time of this writing the Senate Committee is considering sponsoring the change as a committee bill.

Implications for Curriculum, Instruction, and Measurement

If the rationale included in its report to the General Assembly is any indication, the Special Joint Committee did consider curriculum and instructional implications when it proposed the use of the eleventh grade test as an additional criterion for the high school diploma. Further, the Committee addressed, at least indirectly, the legal issue of adequate, or inadequate, notice. This is reflected in the statement concerning "...the unfairness of arbitrarily imposing graduation requirements on students who have not had the benefit of programmatic changes that are designed to develop curricula that can prepare the student for the proficiency examination".

Although the committee also mentioned test validity in their report, there is no indication that cognizance was taken either of the difficulty in defining "adult functional competency" or in presenting an acceptable defense for the definition in the event of a legal challenge.[2] Substitution by the Committee of a test of basic skills in reading, writing, and mathematics would, I believe, have considerably reduced the potential measurement problems without having any significantly different impact on either curriculum or instruction. Although the discussion here deals with the stage at which the legislation was being conceptualized, the "framework" used to guide test development addresses the issue in the following manner.

> ...whereas the concept of "basic" is obviously judgmental and thus less subject to empirical verification, this is not so with a test that purports to measure functional competency. The notion of "competency" carries with it the clear possibility of empirical corroboration, that is, whether low-scoring examinees are truly incapable of functioning with competence in adult society. (Instructional Objectives Exchange, "A Framework for the Development of the Eleventh Grade Tests", 1980, pp. 2-3)

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[2]Reference to potential legal problems may reflect a certain degree of paranoia, but apparently one of the quickest means to achieve national name recognition is to be responsible for a program that ties test performance to the receipt of a high school diploma.

Clearly, persuading a court of law of the construct validity of a test of "adult functional competency" would present a more onerous task than defending the concept of "basics" in a test of reading, writing, and mathematics. Although test development has been guided by the Advisory Commission's recommendation and the "Framework", the issue of what must be defended should a legal challenge ensue is still unresolved. For purposes of administration, the test will be labeled "basic skills" -- the law still refers to a test of "Adult Functional Competency". Consequently, an attempt is being made to change the law, even though the test development is nearly completed.

Under the assumption that curriculum and instruction are more likely to be influenced by what is tested than by what the test is labeled, there is little reason to expect that either would be much affected by a change from "competency" to "basic skills". The truth is that the test content would probably vary little, if at all, as a result of the change. The curricular and instructional considerations are really implicit in the requirements that statewide objectives with minimum standards of achievement for reading, writing, and mathematics be explicated for Grades K-12 and that criterion-referenced tests be employed to assess student achievement relative to the objectives. These requirements have resulted in a large-scale effort on the part of school district personnel in reviewing curriculum guides and instructional materials to ensure correlation with the state objectives.

For better or worse, richer or poorer, there appears to have been a marriage between testing and instruction and, at least in the short-term, there is no recourse to divorce.

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